



INTERNATIONAL COFFEE ORGANIZATION
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**ICO Seminar on the Coffee Berry Borer
(17 March 2009)**

Summary report by the Chairman

Background

1. A Seminar on the Coffee Berry Borer (CBB) took place on Tuesday, 17 March 2009 at the ICO headquarters in London, chaired by Dr Romano Kiome, Permanent Secretary, Ministry of Agriculture (Kenya).
2. The Chairman made a summary report to the Council at its 102nd Session from 18 to 20 March 2009, a copy of which is attached.

SUMMARY REPORT BY THE CHAIRMAN OF THE SEMINAR ON THE COFFEE BERRY BORER (CBB)

The aim of the Seminar was to inform Members and other participants about the CBB, results of initiatives to combat the pest, the latest developments in control measures and regional issues associated with the CBB, and measures to mitigate its impact on the coffee industry. The Seminar arose as the result of a survey conducted among ICO Members on coffee pests and diseases (document EB-3948/08), which identified the CBB as ‘clearly the most prevalent pest’ affecting coffee.

It was divided into three sections: an overview of the results of a previous ICO project to combat the CBB; new measures under development to combat this pest; and presentations on the current situation in coffee-growing regions.

Presentations were made by the following speakers:

Overview of the results of an ICO project to combat the CBB

- Dr Peter Baker, Project Development Coordinator, CABI Bioscience: General overview of status and impact of the CBB.
- Mr Caleb Dengu, First Project Manager, Common Fund for Commodities: Overview of results of ICO project to combat the CBB in the context of the policies of the CFC.

Developments in measures to combat the CBB

- Dr Fernando E. Vega, Research Entomologist, Sustainable Perennial Crops Laboratory, US Department of Agriculture: The CBB, *Hypothenemus hampei*: a short review with recent findings and future research directions.
- Dr Juliana Jaramillo, Visiting Scientist, African Insect Science for Food and Health (ICIPE): Back to Africa: understanding the biology and biological control of the coffee berry borer.
- Dr César Augusto Domingues Teixeira, Researcher, EMBRAPA, Brazil: results obtained from research into the control of the CBB in Robusta coffee (the presenter was unable to attend the meeting but his presentation was disseminated to Members).
- Dr Francisco Infante, Researcher, Department of Tropical Entomology, ECOSUR, Mexico: Latin American natural enemies of the coffee berry borer, with emphasis on the nematode *Metaparasitylenchus hypothenemi*.

Regional issues

- Latin America and Caribbean: Dr Gabriel Cadena, Director of the National Coffee Research Centre, CENICAFE, Colombia.
- Africa: Dr Africano Kangire, Director of Research, National Agricultural Research Organization, Uganda.
- Asia-Oceania: Dr P. K. Vinod Kumar, Head, Division of Entomology, Central Coffee Research Institute, Coffee Board of India.
- Asia-Oceania: Dr Surip Mawardi, Researcher, Indonesian Coffee and Cocoa Research Institute.

Additional contributions were made by:

Dr H.M. Mugo and Dr J.K. Kimemia, Coffee Research Foundation, Kenya: ‘The coffee berry borer in Eastern Africa region: the extent of spread, damage and management systems’
Dr Bernard Pierre Dufour, CIRAD, France ‘Coffee berry borer triple-action integrated pest management’.

Conclusions

1. The CBB is very difficult to control, especially because of its small size and cryptic lifestyle. The economic losses to the coffee sector are estimated at around US\$0.5 billion per year, equivalent to more than 3% of the export earnings derived from coffee by producing countries in 2008.
2. An Integrated Pest Management (IPM) approach using cultural, chemical and biological controls is the preferred approach to mitigate the harmful effects of the CBB.
3. The section on regional issues showed that there is already a considerable amount of practical experience and knowledge in this area and that a range of strategies is available and has been disseminated throughout the world’s coffee-growing regions. These include:
 - (a) cultural controls: hand-picking, removal of fallen berries and use of picking mats;
 - (b) chemical controls: use of crop protection products, which are increasingly called into question on health and safety grounds; and
 - (c) biological controls: manipulation of natural predators, release of parasitoids, use of fungi and deployment of attractants to trap the borer.
4. The section on new developments presented promising areas of new research, such as:
 - (a) use of the Wolbachia infection to reduce the fecundity of the female borer;
 - (b) investigation of the ways in which the CBB absorbs caffeine;
 - (c) vulnerability of the CBB to fungi;

- (d) development of better attractants for traps;
- (e) development of CBB repellents;
- (f) investigation of the roles of endophytes;
- (g) establishment of fungal insect pathogens as systemic endophytes;
- (h) use of mass emergence devices; and
- (i) investigation of other natural enemies of the CBB from Africa and Latin America.

5. Another approach is the development of varieties of coffee resistant to the CBB. This resistance can be attained through traditional methods of breeding or by genetic modification. However, the development of these varieties take time (at least 15 to 20 years).

6. The problem of the CBB is likely to become even more prevalent in the future, as the result of changing global weather patterns. Studies have already noted the presence of the CBB at altitudes at which it did not exist in the past.

7. The wide variations in the success of the same control measures applied in different countries demonstrate the need to take into account local conditions when designing control measures. The presence of strong agricultural research institutions and extension services are of particular importance.

Thanks

I would like to thank all the distinguished presenters, as well as those who contributed to the question and answer session that followed. I would also like to thank the Executive Director for organizing the Seminar, as well as for the choice of such outstanding speakers.

Finally, I would like to congratulate the Council for having chosen this important subject as the theme for this year's Seminar. This exchange of ideas, which the ICO has facilitated, has provided scientists, researchers and policy-makers with essential information for the future development of the world coffee sector. I very much hope that the exchange of ideas on this important topic will continue and encourage the broadest possible dissemination of the contents of this Seminar.